LOADER

MX U6
MX U8
MX U10
MX U12

User manual

Please read carefully before using MX loader

UK 364130 AD - 0411
Original instructions

Dear users,

Thanks you for confidence in our product. We are sure it will give you full satisfaction.

By taking a few minutes to read this manual, you will be able to obtain the best results from your MX loader, extend its lifespan and work in complete safety.

The loader user manual is a very important document, please keep it with you in order to be able to use it if required. Leave it available to any other user and give it to the next owner of this loader.

Pictures and technical information included in this document may not correspond precisely to your loader; but the working conditions will be the same.

CONTENTS

	Page
1. SAFETY REGULATIONS	6
2. SAFETY STICKERS	7
3.IDENTIFICATION PLATE	7
4. COUNTERWEIGHT	8
5. LOADER UNHITCHING	9
6. LOADER HITCHING	12
7. IMPLEMENT UNHITCHING	14
8. IMPLEMENT HITCHING	15
9. IMPLEMENT CARRIER FRAME MODELS	17
10. IMPLEMENT LEVEL INDICATOR	18
11. SHOCK ELIMINATOR SYSTEM	19
12. SAFETY DEVICE ON LIFTING/CROWDING	19
13. MAINTENANCE	19
14. GENERAL INFORMATION	20
15. CONTROL	21
16. TECHNICAL SPECIFICATIONS	23
DECLARATION OF CONFORMITY	24

The loader is a complex machine. The end user must read this instruction book before first use.

Familiarise yourself with

— Safety instructions.

— Hitching and unhitching of the loader.

— Hitching and unhitching of the implements.

— Full use of the controls.

1. SAFETY INSTRUCTIONS

— Control the loader only from the driver's seat. Do not let go of the controls until the movements are complete.

— Do not leave the seat before locking the controls to prevent any movement.

— Never leave the tractor while its loader is lifted. Following loader use, park the tractor with the loader lowered to the ground.

— It is compulsory to ensure that nobody is in the area while the loader is in use.

— The operation must use the implement designed and recommended by MX for the work to be carried out.

— The transport or elevation of persons using the loader is forbidden.

— Ensure tractor stability by using a counterweight. Please check the information regarding the counterweight in this user manual.

— Restrict all movements while the load is lifted as the tractor may become unbalanced.

— The maximum front axle safe load provided by the tractor's manufacturer must not be exceeded.

— The maximum front tyres safe load provided by the tyres's manufacturer must not be exceeded.

— Check regularly tyres pressure.

— Regularly check the presence of safety pins and bolts. Do not replace with any other object such as nails, wire, etc.

— Hitch the loader only to a tractor fitted with a roll-over protective structure (ROPS) or a falling object protective structure (FOPS). This should be in the protective position when using the loader.

— Watch out for overhead electrical and telephone cables when manoeuvring with the loader in the raised position.

— In compliance with the standard EN 12525, the controls for operating the loader and implements must be of the "sustained action" type with the exception of the lift floating position which can be maintained in its position by a notching system.

— Any activity relating to defect investigation (diagnosis) and / or disassembly of parts may only be undertaken by an accredited professional who shall assure his safety and the protection of the environment in which the actvity is conducted, in particular in the event of an activity involving the loader staying in the lifted position.

! CAUTION !

— The loader's hydraulic circuit is designed to have a maximum service pressure of 200 bar.

— Never modify hose connections.

— The breaking of the seals will result in the cancellation of the MX responsibility for all the equipment supplied.

— The assembly of an MX loader which excludes the recommendations in the MX price list in force at the purchase date, cancels the MX guarantee on all the equipment supplied.

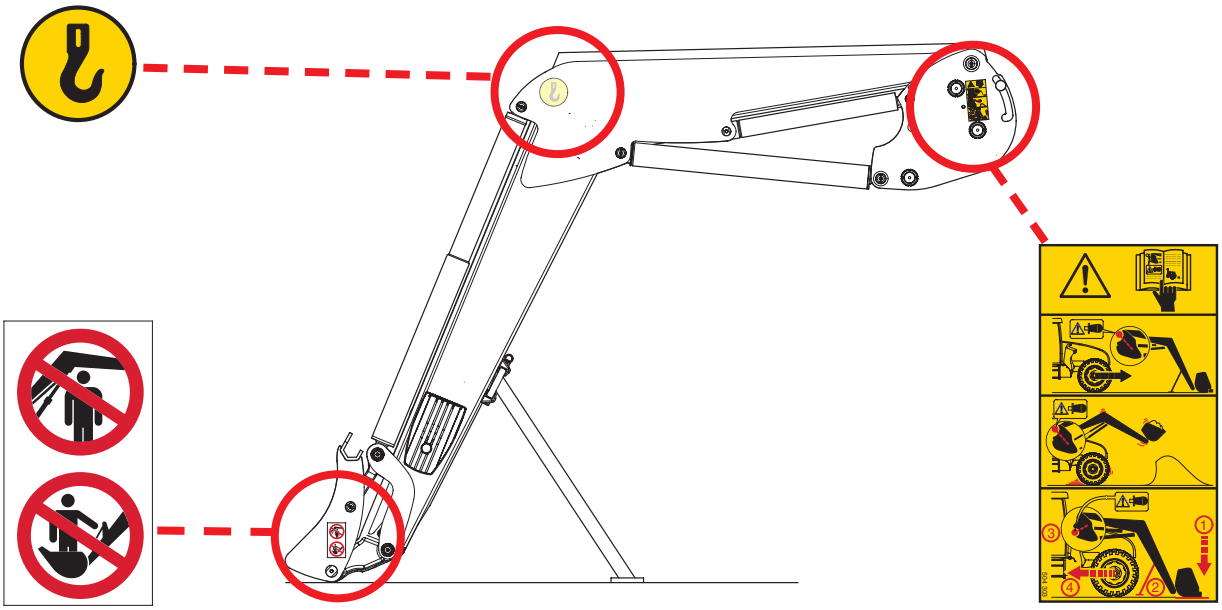
— Any modification to a section of any MX equipment (implements, loader, bracket, etc.) or the use of an implement or element installed on the MX loader of foreign origin, cancels the MX guarantee for all equipment supplied.

— Use only MX original spare parts. Do not modify your MX loader or its accessories yourself or have another person modify them (mechanical, electrical, hydraulic, pneumatic characteristics), without prior written agreement from MX. Failure to respect these regulations may make the loader dangerous. MX will disclaim all responsibility in the event of damage or injury.

— The guarantee is immediately invalid when the instructions for use, and the MX loader maintenance schedule outlined in "User Manual" are not observed.

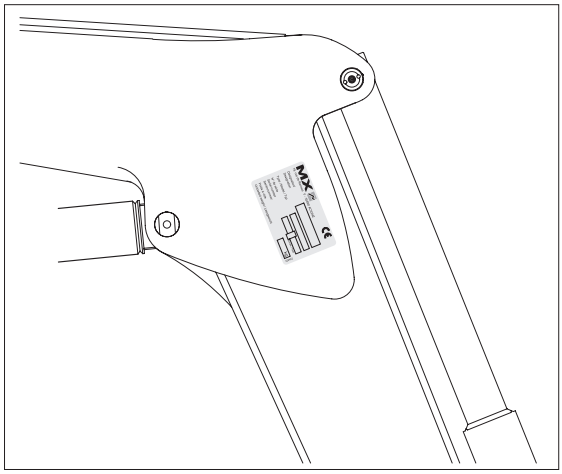
2. SAFETY STICKERS

Security stickers are located on the loader. Keep them readable and clean, and change them if damaged.

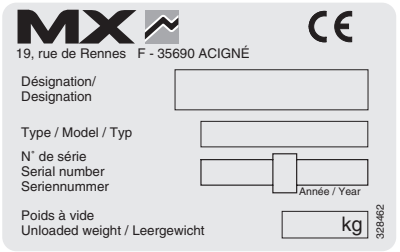


3. IDENTIFICATION PLATE

The identification plate is located inside the LH arm.



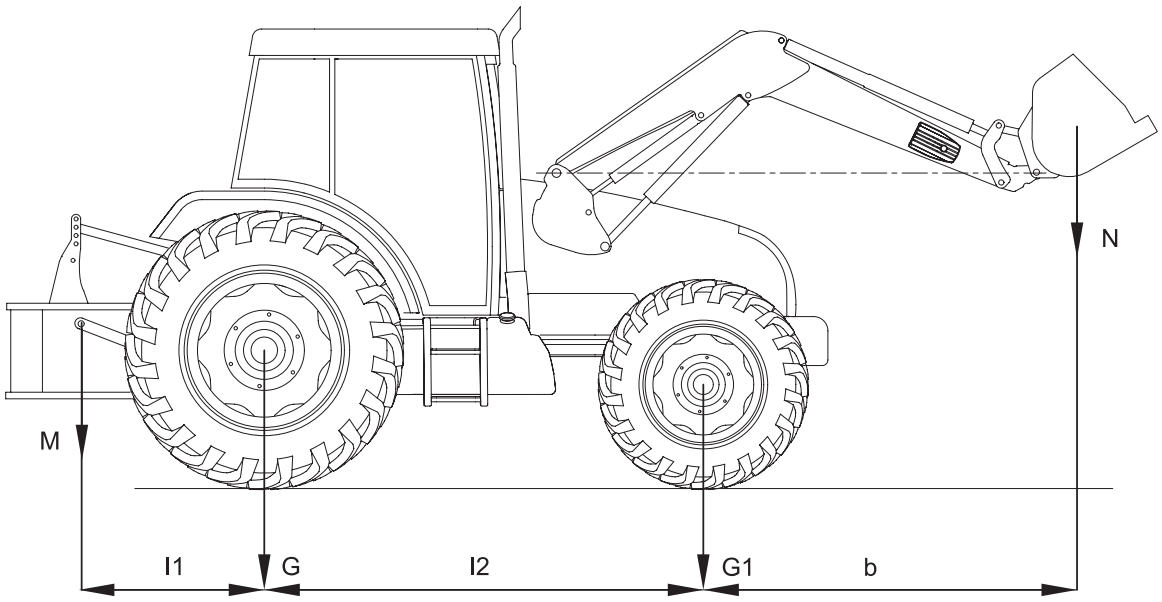
The serial number and loader type which are indicated on this plate might be requested when requiring spare parts or technical assistance.



4. COUNTERWEIGHT

The stability of the tractor and loader can only be ensured with a counterweight on the rear of the tractor. This counterweight must ensure that a minimun of 20 % of the total weight (Tractor, loader, implement, maximum load and counterweight) is applied on the back axle of the tractor in order to work in a safe condition.

Below is the calculation method which indicates the required counterweight (M).



$$M \geq \frac{5\,N\,b + I2\,(P + N - 5\,G)}{5\,(I1 + I2) - I2}$$

G : Weight on the rear axle, wihtout counterweight, with an empty implement (kg).
G1 : Weight on the front axle, without counterweight, with an empty implement (kg).
b : Distance from the front axle to the implement centre of gravity (mm).
I1 : Distance from rear linkage pins to the rear axle (mm).
I2 : Wheelbase.
N : Loader payload at 2 m (Kg).
P : G + G1 (kg)
M : Weight of the counterweight (kg).

5. LOADER UNHITCHING

You will also find a video showing the unhitching/hitching on **www.m-x.eu**

Caution

This operation must be carried out by the driver who must leave the seat and ensure all manoeuvres are forbidden while he is working on the loader.

The loader must **always** be coupled to an implement to unhitch it.

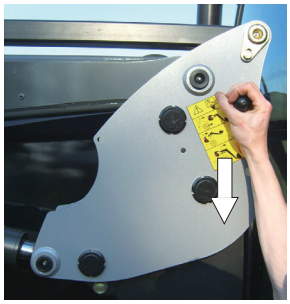
5.1 Choose a flat and stable area.

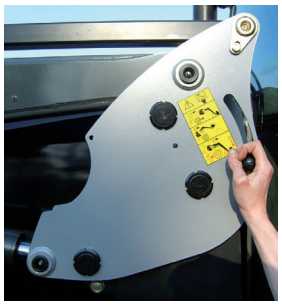
5.2 Lower the loader with **double acting** in order to slightly lift the front axle of the tractor, with the implement horizontal to the ground. Operate in single acting mode, then back to neutral. The lift rams will be filled both sides with oil and involuntary movements of the loader will be limited when the loader has prolonged exposure to the sun and will ensure the hitching is correct.

5.3 Pull the parking brake. Turn off the engine

5.4 Get out of the tractor.

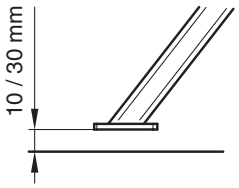
5.5 Lower the L.H. side Fitlock frame handle until it is locked inside the frame notch.





5.6 Fit the left and right parking stands:
Open stands covers. Pull the stands out and place them in designated position under the loader jib by pulling up the locking pins.

N.B.: A gab (10 to 30 mm) should remain between the stand and the ground.
Adjust the stand's length if necessary.

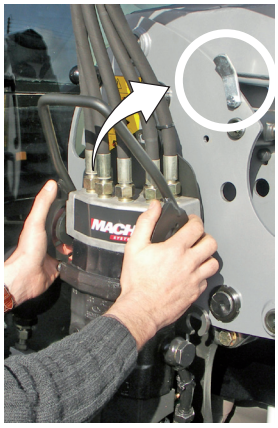


5.7 Disconnect the hydraulic's and electric's.

5.7.1 Loader with MACH System:

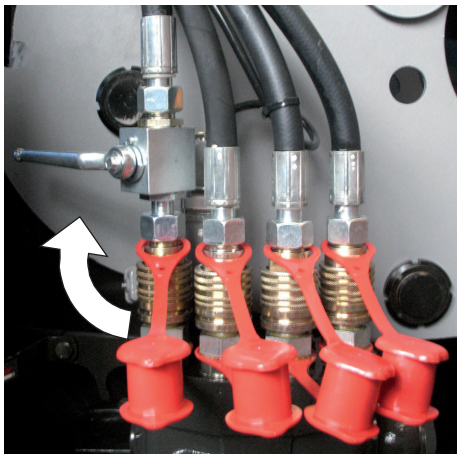
Release the MACH System housing by pushing the locking pin on the LH side and lifting the handle up.

Hook the MACH System on the support.

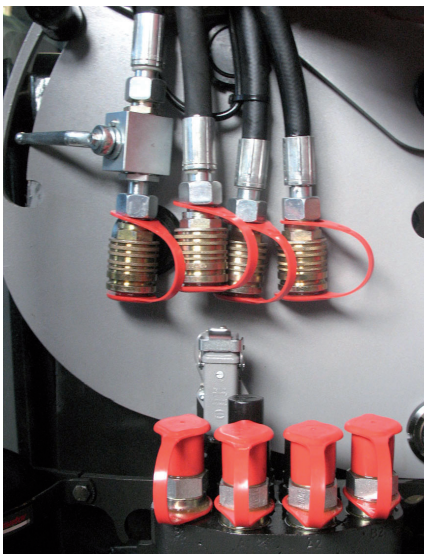


5.7.2 Loader without MACH System:

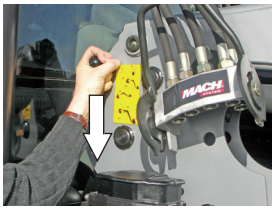
Close the tap and disconnect the couplings.



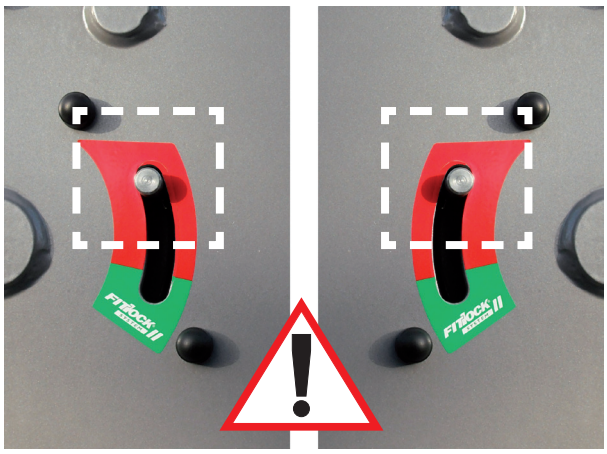
Position the protective covers (clean) to the male and female couplings. Store the hoses on the loader.



5.8 Lower the R.H. side Fitlock frame handle, until it is locked in the frame's notch.



5.9 Get back into the tractor. Check that the locking indicators are in the red area (Unlocked position).



5.10 Reverse the tractor first with a rapid movement, then more slowly until the loader rests on its stands.

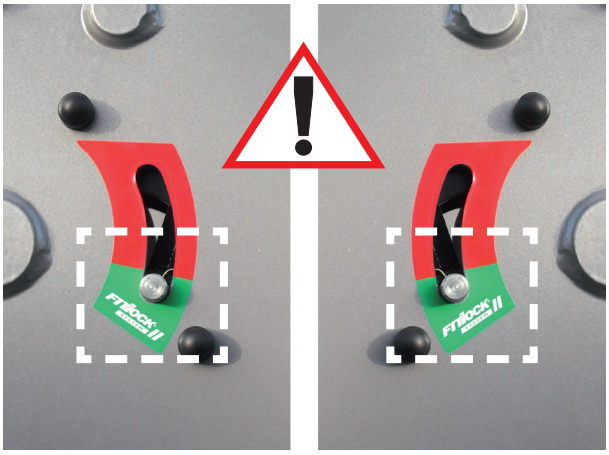
5.11 Check the loader's stability.

6. LOADER HITCHING

You will also find a video showing the unhitching/hitching on **www.m-x.eu**

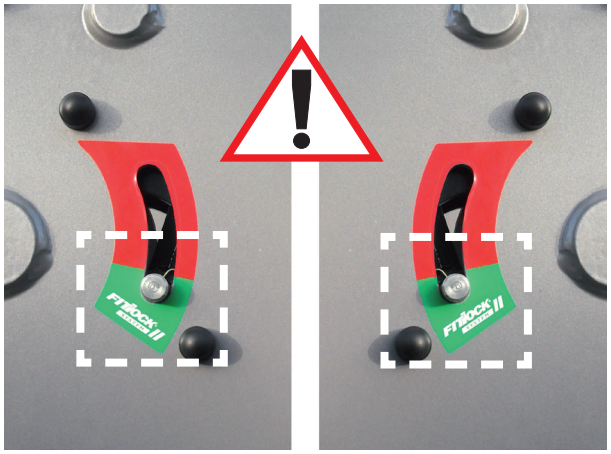
6.1 Check on the L.H. / R.H. side beams that **the locking indicators are in the green area** and that no object will obstruct the loader hitching. The bracket are designed with a roller and a ramp which will lift the loader when hitching.

Indicators in the green = ready to hitch



6.2 Drive the tractor forward in order to guide the loader frame on to the brackets until the catches are automatically triggered.

The loader is locked when indicators are in the green area.



If the indicators are still in the red zone, refer to the "Difficult hitching" section.

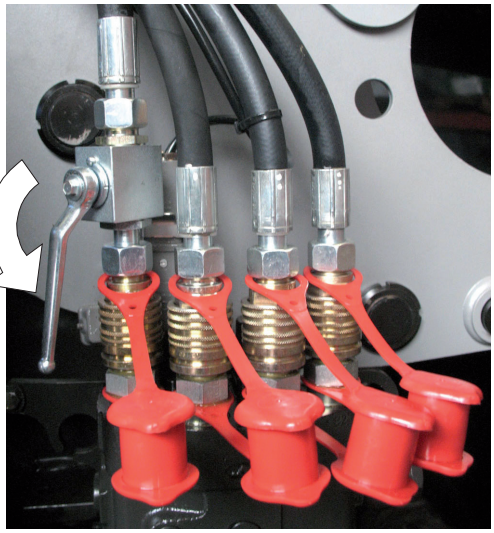
6.3 Connect the hydraulic's and electric's.

6.3.1 Loader with MACH System:

Hold the housing with two hands and using the back of the housing lift the valve cover and fit the guide bars vertically into place.

6.3.2 Loader without MACH System.

Remove the plastic covers on the couplings.
Connect the couplings.
Open the tap.

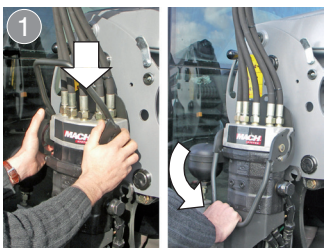


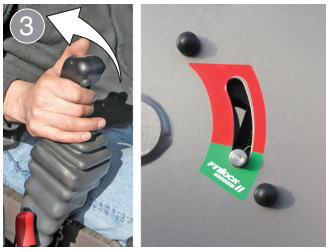
6.4 Remove L.H. and R.H. side parking stands and place them in the corresponding side's cross beam (L.H. in lower part of cross-beam. R.H. side in the upper part).

6.5 Checking before work :
Press on the ground with an implement to check if loader is correctly hitched on the tractor. Use D.A. mode.

Difficult hitching

1. Connect the hydraulic's and electric's (1).
2. Operate in single acting mode + Moving the tractor forward (2). If necessary turn the wheels.
3. Operate lifting movement slightly (3). **The loader is locked** (Indicators in the green).
4. Fold the parking stands away : see §6.4.
5. Checking before work : see §6.5.





7. IMPLEMENT UNHITCHING

Caution

This operation must be carried out by the driver who must leave the seat and ensure all manoeuvres are forbidden while he is working on the loader.

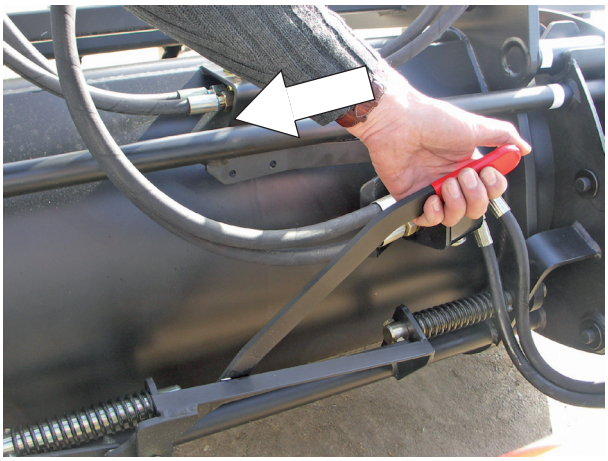
7.1 Implement carrier with manual unlocking:

7.1.1 Before leaving the operator's seat:

Select a stable parking area.
Lower the implement horizontally to 0.30 m from the ground,
Pull on the handbrake,
Turn off the engine,
Decompress the loader's hydraulic lines feeding the implement.
When loader fitted with one or several solenoid valves, leave contact on and move the lever Left/Right while pressing the buttons.

7.1.2 Implement unhitching:

From the L.H. side of the loader, pull on the lever to the end. **Never operate from the front** of the implement.



Then, move the lever backwards to lock it (compressed springs).

7.1.3 Disconnect the hydraulic's.

MACH 2: disconnect.
Couplings: disconnect and place plastic caps on the male and female couplings.

Place the hoses on the front of the implement.

7.2 **FAST LOCK** implement frame carrier

Raise the loader to lift the implement off the ground. With the implement horizontal, press the green and orange buttons while moving the crowd lever to the right (dumping).
The implement is now unlocked.
Place the implement on the ground by slightly tipping it to free the implement carrier from the implement.
NOTE: If the implement has one or more hydraulic functions, firstly disconnect the hoses. See § 7.1.3.

8. IMPLEMENT HITCHING

Caution

This operation must be carried out by the driver who must leave the seat and ensure all manoeuvres are forbidden while he is working on the loader.

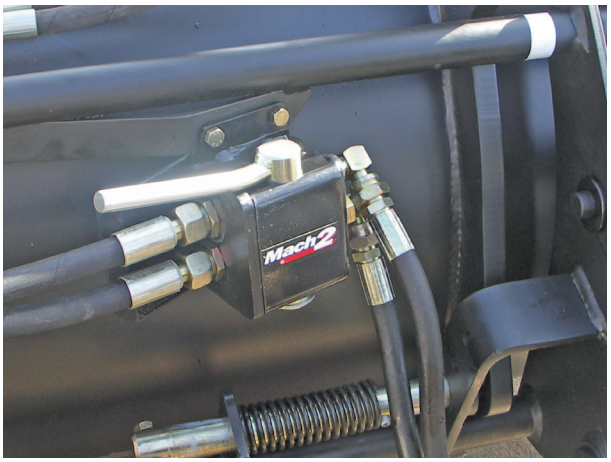
8.1 Implement carrier with manual unlocking.

8.1.1 Check the unlocking lever is in the hitching position (lever turned backwards). Locking pins are retracted, springs are compressed.
CAUTION: check implement hoses are away from hitching area.

8.1.2 Approach the loader towards the implement. Slot the "self-centering V" onto the implement's hitching brackets. Crowd the implement back while driving forwards until the unlocking lever is triggered.

8.1.3 Turn the engine off :
Decompress the loader's hydraulic lines feeding the implement.
N.B.: If the loader is fitted with a solenoid valve: decompress, with contact turned on and the control button pressed.

8.1.4 Connect the couplers when implement with hydraulic functions.



8.2 **FAST LOCK** implement frame carrier

Before attaching the implement, ensure that the locks are in the "open" position to allow the implement's parts to pass. Move the loader along the axis of the implement, drive the implement carrier into the implement, gently crowd and raise the loader to lift the implement from the ground.
Press the green and orange buttons by moving the crowd lever to the left (crowd). The implement is now locked.
NOTE: If the implement has one or more hydraulic functions, connect the hoses. See § 8.1.4 .

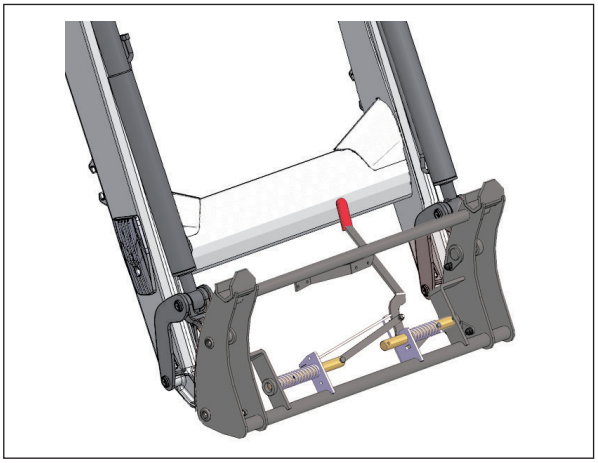
⚠ Checking before work.

Press on the ground to check if implement is correctly locked on the loader. Use D.A. mode.

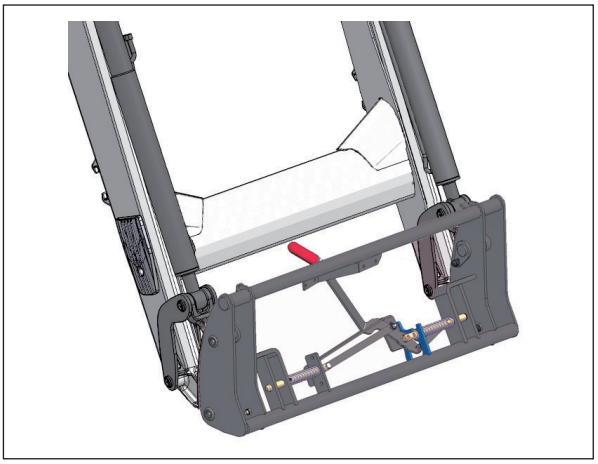
Manoeuver each hydraulic service to its maximum, in each direction to check the correct operation of the hydraulic system and that there are no leaks.

9. IMPLEMENT CARRIER FRAME MODELS

9.1 **MX Master-Attach** implement carrier frame



9.2 **Euro** implement carrier frame



9.3 **MX Master-Attach / Euro** implement carrier frame

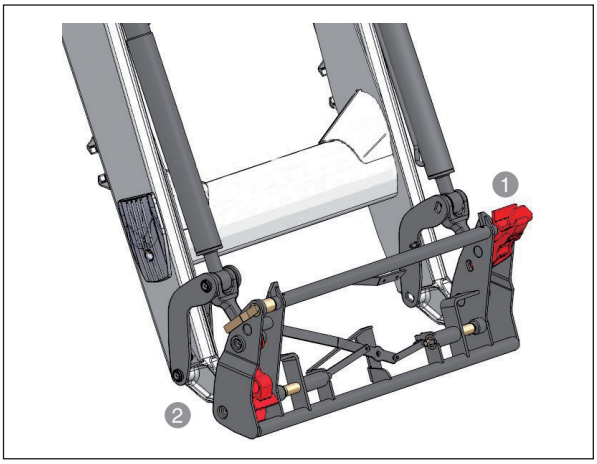
To switch from the MX Master-Attach (1) position to the Euro position (2),

— Remove the pins,

— Tilt the hitch shoes downwards,

— Ensure that the hitch shoes are kept in position by the spring rods,

— Put the pins back to their initial position.

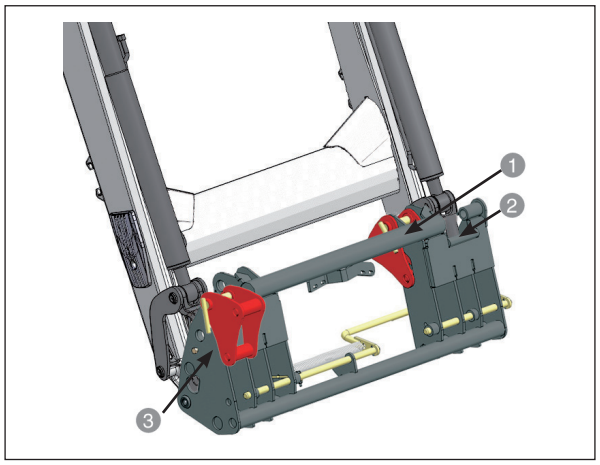


9.4 **Euro / SMS / ALÖ3** implement carrier frame

To switch from the SMS 1 or ALÖ3 2 position to the Euro 3 position,
Remove the split pins then the pins,

— Take the RH hitch shoe, and position it on the left by rotating it through 180°,

— Proceed in the same manner for the LH hitch shoe.



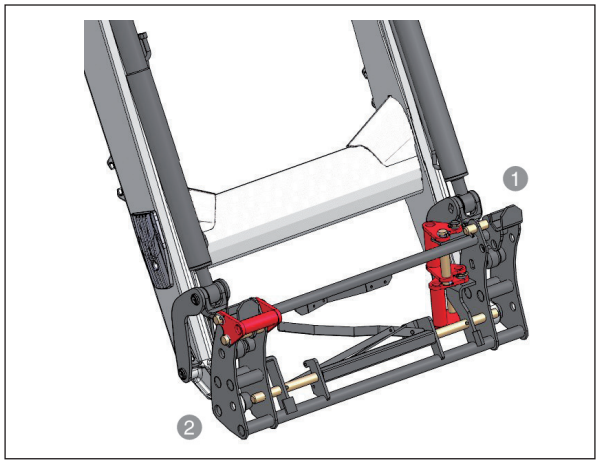
9.5 **MX Master-Attach / Faucheux-Blanc** implement carrier frame

To switch from the MX Master-Attach position 1 to the Faucheux-Blanc position 2 ,

— Remove the hitch shoes from their storage position,

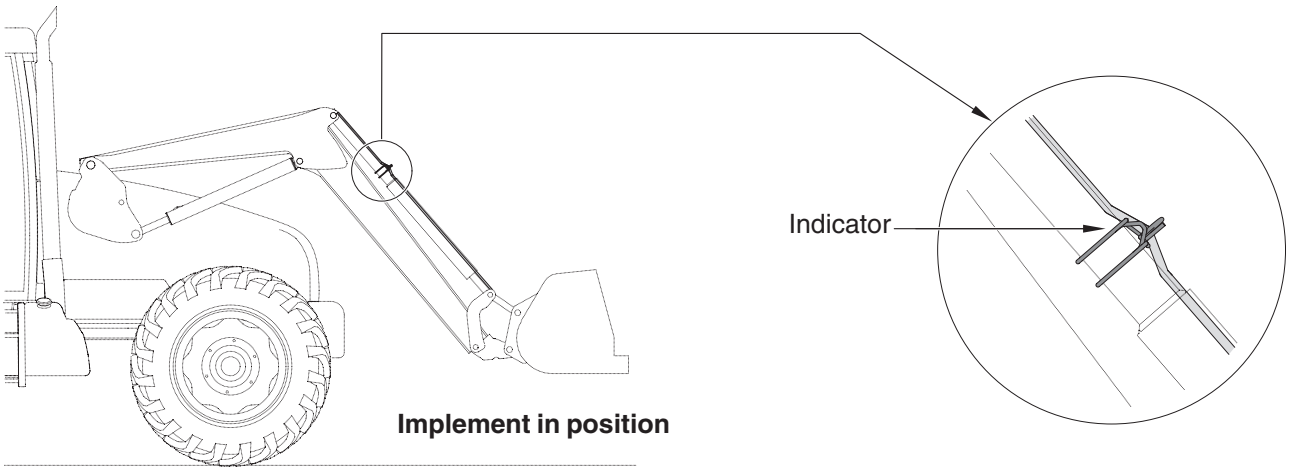
— Fit them in the hitching position and add the 4 attachment pins,

— Fit the lynch pins to the attachment pins.



10. IMPLEMENT LEVEL INDICATOR

The implement level indicator is useful for implement repositioning. Efficient even while lowering the loader, it is adjustable according to the implement type.

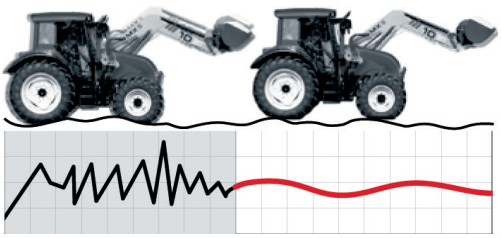


Implement in position

11. SHOCK ELIMINATOR SYSTEM *

Shocks are eliminated when moving the loader or when it stops suddenly when being lowered.
This system softens jolting on the tractor and therefore jarring in the cab.

The Shock Eliminator can be enabled or disabled directly from the cab (electric isolation option).



Without SHOCK ELIMINATOR | With SHOCK ELIMINATOR

12. SAFETY DEVICE ON LIFTING/CROWDING *

If the loaders lifting operation requires people to be in the close proximity, the hydraulic circuit of the loader must have safety device fitted to it.
This in accordance with the standard EN 12525/A1, from July 2006.

* depending on equipment

13. MAINTENANCE

Caution

Change the tractor hydraulic oil and filters regularly in accordance with the tractor manufacturer recommendations. Used oil does not lubricate, it also contributes to the damage of all hydraulic components (pump, valves, rams…).Even clear oil may not lubricate.

For any maintenance operations made whilst the loader is the raised position, the loader must be locked into position.

Two possibilities :

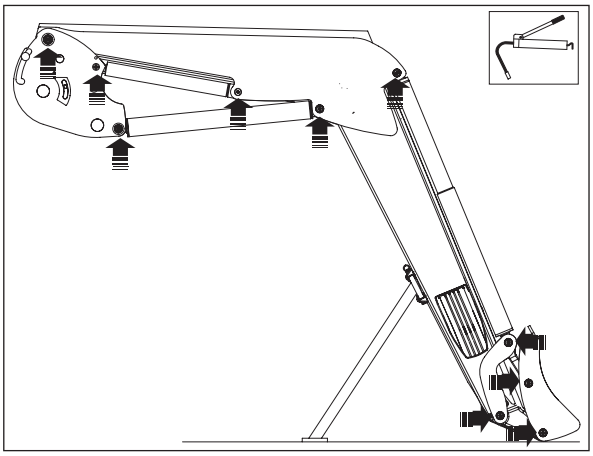
— Lock the joystick in the cab (see chapter 19, Control).
or,

— Disconnection of the MACH System if loader has one, or closing the tap fitted on the lifting coupler if the loader is without MACH System (see chapter 5, Loader unhitching).

When using a high presssure cleaner, do not direct water towards the electrical components.

Clean the implement and the loader front after each use. The acid from slurry, fertilisers and silage is harmful to paint, steel and the machine's pivot points.

Grease every 10 hours and after each wash (grease eliminates water) and particularly after washing with a high pressure cleaner.



Check the following each month, and more frequently when used intensively:

— Condition of the loader articulations. If necessary, replace the wear bushes and/or the pins.

— The wear bushes must be replaced if they are less than 1 mm thick.

— The tractor's hydraulic oil level and the sealing of the hydraulic system. If you notice any internal or external leaks on the hydraulic parts (rams, hoses, connectors, Mach, couplings, etc.), contact your dealer.

— Condition of the hoses: replace them if you notice any small cracks or oil seepage.

— Correct operation of the monolever (cables, play, locking, etc.).

— Condition of the electric wiring. Please contact your dealer if there is any damage to connectors or cables.

— Mechanical condition (any cracking, deformation, fretting on stops, play, parking stands, etc.). Please contact your dealer if there is any abnormal wear.

Check the tightness of the bracket after 10, 50 hours then every 100 hours or when carring out tractor maintenance. In case of untightness, please contact your dealer.

IMPORTANT:
All the screws needing to be retightened must be inspected, changed if necessary, cleaned and smeared with loctite.
Tighten the screws to the tightening torque specified in the table below.
Use of a pneumatic spanner to tighten the screws on the tractor is forbidden.

Tightening torque (Nm)

Thread	Class of bolt		
	8.8	**10.9**	**12.9**
M 8	21	29	35
M 10	42	58	70
M 12	72	101	121
M 14	114	160	193
M 16	174	245	295
M 18	240	340	405
M 20	340	475	570
M 22	455	640	765
M 30 x 150	500		
M 40 x 150	500		

14. GENERAL INFORMATION

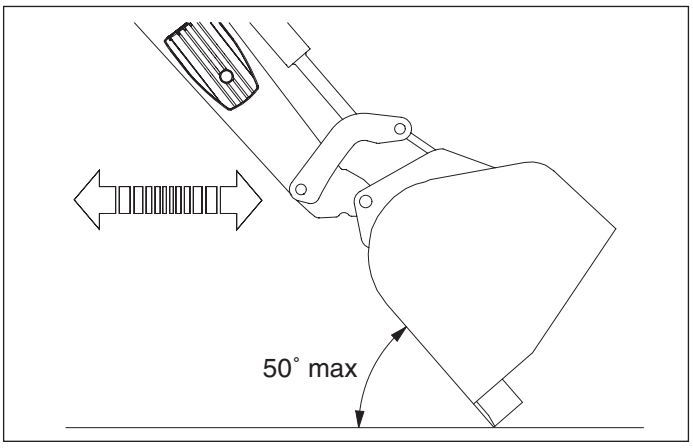
— Each implement is designed for a specific use and has its own resistance limits.

— Land clearing and stump extraction are forbiden. Such work should be carried out by a specialist vehicle and is not possible for an agricultural loader.

— Use the tractor's power to enter in the material to be moved rather than approaching it with speed, which will generate high stress on tractor and loader.

— When the load to be manoeuvred is too heavy, do not apply force to the hydraulic components. This also applies when rams are fully closed or extended. Please release the control lever.

— When ground levelling, work at a slow speed with the implement at a maximum angle of 50° with respect to the ground.



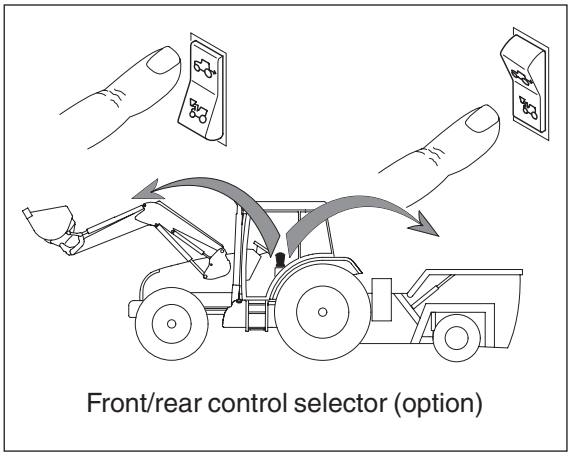
Operate with flexibility and in a judicious manner.

15. CONTROL

Important: Never leave the tractor with loader in raised position.
All spool valves produce an internal leak required for correct operation.

15.1 On tractor valves :
Please report to the tractor's instruction book.

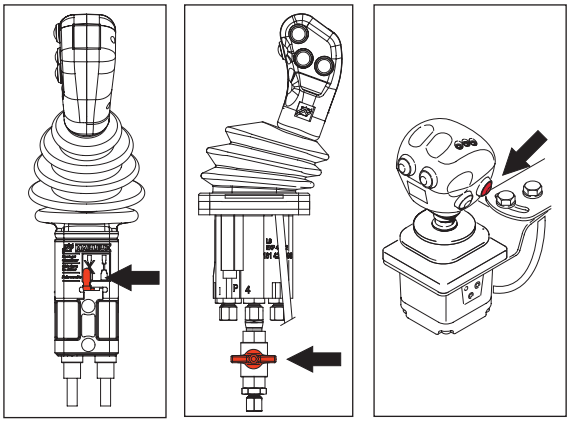
15.1.1 Front/rear control selector (option) :
From the original joystick of the tractor, the operator can control the MX loader or the rear couplers from the cab.



Front/rear control selector (option)

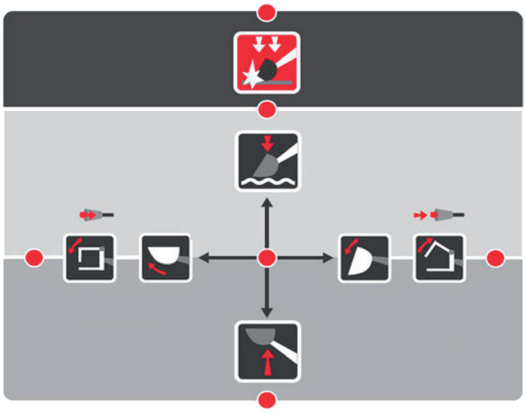
15.2 On MX valves :

15.2.1 Security
Involuntary loader manoeuvre can be avoided. The MX joystick can be locked.
See diagram.



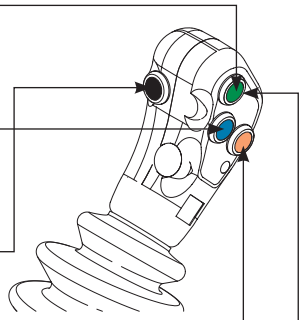
PROPILOT **FLEXPILOT** **TECHPILOT**

15.2.2 Lifting-crowding movements



15.2.3 Other movements

PROPILOT - FLEXPILOT



3rd function :
Green button + Crowding.

4th function - SCS :
Blue button + Crowding.

ACS : Implement return to dig (Flexpilot only)
Black button.

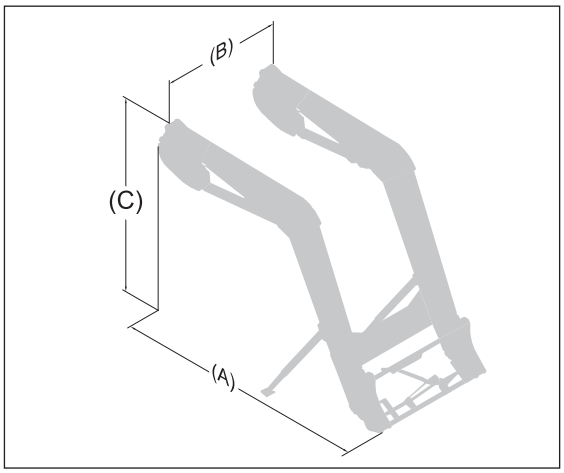
FAST-LOCK :
Implement hydraulic locking / unlocking
Green + Orange buttons + Crowding.

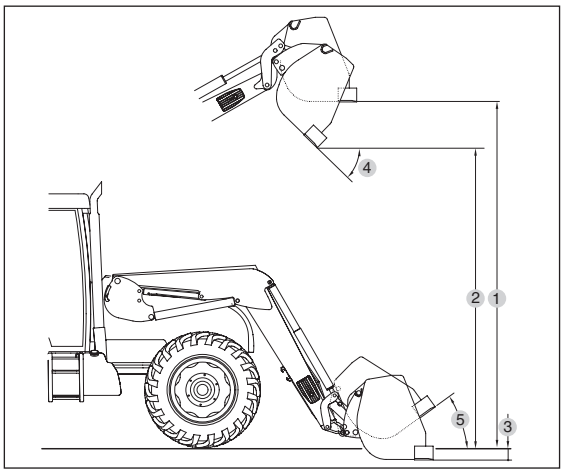
SPEED-LINK :
Implement automatic locking / unlocking including hydraulic and electric connections.
Green + Orange buttons + Crowding.

TECHPILOT

Please refer to Techpilot instruction book.

16. TECHNICAL SPECIFICATIONS





		MX U6	MX U8	MX U10	MX U12
Length (A)		**2.30 m**	**2.40 m**	**2.50 m**	**2.60 m**
Width (B)		**1.18 m**	**1.18 m**	**1.18 m**	**1.18 m**
Height (C)	Without parallelogram	**1.72 m**	**1.77 m**	**1.83 m**	**–**
	With parallelogram	**1.84 m**	**1.88 m**	**1.94 m**	**1.98 m**
Weight (without option)	Without parallelogram	**405 Kg**	**430 Kg**	**545 Kg**	**–**
	With parallelogram	**435 Kg**	**460 Kg**	**570 Kg**	**595 Kg**
Maximum height at implement pivot *		**3.75 m**	**3.85 m**	**4.00 m**	**4.15 m**
Maximum height under horizontal bucket (1) #		**3.50 m**	**3.60 m**	**3.75 m**	**3.90 m**
Maximum height under dumped bucket (2) #		**2.95 m**	**3.05 m**	**3.20 m**	**3.35 m**
Digging depth (3) #		**0.20 m**	**0.20 m**	**0.20 m**	**0.20 m**
Dumping angle at maximum height (4) #		**52 °**	**55 °**	**55 °**	**55 °**
Crowd angle (5) #		**47 °**	**47 °**	**47 °**	**47 °**
Lift force at implement pivot *		**1900 Kg**	**2100 Kg**	**2400 Kg**	**2400 Kg**
Lift capacity at implement pivot over the entire lifting range *		**1500 Kg**	**1900 Kg**	**2200 Kg**	**2200 Kg**
Payload on pallet 0.60 m in front of the forks					
At ground level	Without parallelogram	**1370 Kg**	**1750 Kg**	**1600 Kg**	**–**
	With parallelogram	**1400 Kg**	**1650 Kg**	**1780 Kg**	**1825 Kg**
At 2 m height	Without parallelogram	**1200 Kg**	**1650 Kg**	**1550 Kg**	**–**
	With parallelogram	**1400 Kg**	**1650 Kg**	**1780 Kg**	**1825 Kg**
At 3 m height	Without parallelogram	**1000 Kg**	**1550 Kg**	**1525 Kg**	**–**
	With parallelogram	**1400 Kg**	**1650 Kg**	**1780 Kg**	**1825 Kg**
At maximum height	Without parallelogram	**1030 Kg**	**1500 Kg**	**1500 Kg**	**–**
	With parallelogram	**1400 Kg**	**1650 Kg**	**1780 Kg**	**1825 Kg**

Specifications measured at 190 bar and a flow rate of 60 l/min. Data varies depending on the type of tractor used.
Indicated data are with a loose material bucket.
**** Values at ground level and at implement pivot are not considered to be working data.***

DECLARATION OF CONFORMITY CE

We, the manufacturers :

MX
19,Rue de Rennes
F - 35690 Acigné

Declare that the products:

MX U6, MX U8, MX U10, MX U12 loaders

Comply with standard EN 12525, and its amendments A1 and A2, which presupposes compliance with the requirements of directive 2006/42 EC of the European Parliament and of the Council of 17 May 2006 on machinery.

Acigné, the 30th of March 2011

Loïc Mailleux
Technical Manager

19, rue de Rennes
BP 83221
F - 35690 ACIGNE
Tél. : +33 (0)2 99 62 52 60
Fax : +33 (0)2 99 62 50 22
e-mail : contact@m-x.eu